LOE	Methods for Assessing LOE	Assessments	Potential PRG Matrix (e.g., sediment, surface water, TZW)	Strong LOE? Why?	What issues affect reliability and certainty of LOE?	Can a numeric PRG be derived? (e.g., lack of sediment relationship)*	Corroborated by other LOEs? If so, which ones and what are their strength.	LWG Position – Should this LOE be used to derive PRGs for use in FS?
Risks from fish consumption	Risks calculated based on fish tissue data	Adult consumption	Sediment	Yes. Risks based on empirical fish tissue data. Sediment PRGs based on site-specific FWM.	Exposure parameters for fish consumption (e.g., ingestion rates and preparation methods) highly uncertain. Uncertainties associated with the FWM.	Yes, though chemical specific.	Yes, for some chemicals exceedances of AWQC support the results of this LOE, although AWQC is an uncertain LOE.	Yes (PRGs may be below background)
		Child consumption	Sediment	Yes. Risks based on empirical fish tissue data. Sediment PRGs based on site-specific FWM.	Exposure parameters for fish consumption (e.g., ingestion rates and preparation methods) highly uncertain. Uncertainties associated with the FWM.	Yes, though chemical specific.	Yes, for some chemicals exceedances of AWQC support the results of this LOE, although AWQC is an uncertain LOE.	Yes (PRGs may be below background)
		Adult tribal consumption	Sediment	Yes. Risks based on empirical fish tissue data. Sediment PRGs based on site-specific FWM.	Exposure parameters for fish consumption (e.g., ingestion rates and preparation methods) highly uncertain. Uncertainties associated with the FWM.	Yes, though chemical specific.	Yes, for some chemicals exceedances of AWQC support the results of this LOE, although AWQC is an uncertain LOE.	Yes (PRGs may be below background)
		Child tribal consumption	Sediment	Yes. Risks based on empirical fish tissue data. Sediment PRGs based on site-specific FWM.	Exposure parameters for fish consumption (e.g., ingestion rates and preparation methods) highly uncertain. Uncertainties associated with the FWM.	Yes, though chemical specific.	Yes, for some chemicals exceedances of AWQC support the results of this LOE, although AWQC is an uncertain LOE.	Yes (PRGs may be below background)
	Comparison of surface water to AWQC	Comparison to AWQC (17.5 g/day), point-by-point	Surface water	No. AWQC not site-specific. Criteria intended for average exposures from water bodies (not on a point-by-point basis).	Highly uncertain given that AWQC not based on site-specific uptake of chemicals into fish and AWQC are based on chronic, average exposures from fish consumption.	Yes, AWQC could be PRGs.	For some chemicals, AWQC exceedances are consistent with risks based on empirical tissue data.	No. AWQC highly uncertain.
		Comparison to modified AWQC (175 g/day), point-by-point	Surface water	No. AWQC not site-specific and ingestion rate not used in BHHRA for resident fish. Criteria intended for average exposures from water bodies (not on a point-by-point basis).	Highly uncertain given that AWQC not based on site-specific uptake of chemicals into fish.	Yes, AWQC could be PRGs.	For some chemicals, AWQC exceedances are consistent with risks based on empirical tissue data.	No. AWQC highly uncertain.
		Comparison to AWQC (17.5 g/day), site-wide	Surface water	No. AWQC not site-specific.	Highly uncertain given that AWQC not based on site-specific uptake of chemicals into fish.	Yes, AWQC could be PRGs.	For some chemicals, AWQC exceedances are consistent with risks based on empirical tissue data.	No. AWQC highly uncertain.
		Comparison to modified AWQC (175 g/day), site-wide	Surface water	No. AWQC not site-specific and ingestion rate not used in BHHRA for resident fish.	Highly uncertain given that AWQC not based on site-specific uptake of chemicals into fish.	Yes, AWQC could be PRGs.	For some chemicals, AWQC exceedances are consistent with risks based on empirical tissue data.	No. AWQC highly uncertain.

LOE	Methods for Assessing LOE	Assessments	Potential PRG Matrix (e.g., sediment, surface water, TZW)	Strong LOE? Why?	What issues affect reliability and certainty of LOE?	Can a numeric PRG be derived? (e.g., lack of sediment relationship)*	Corroborated by other LOEs? If so, which ones and what are their strength.	LWG Position – Should this LOE be used to derive PRGs for use in FS?
Risks from shellfish consumption	Risks calculated based on shellfish tissue data	Adult consumption	Sediment	No. It is unlikely that the Study Area supports shellfish populations large enough to supply the quantity of tissue needed to satisfy the hypothetical ingestion rates. There is no documentation of ongoing shellfish consumption within Portland Harbor.	The exposure assumptions for shellfish consumption (i.e., ingestion rates, duration) are highly uncertain.	Yes, though chemical specific.	Yes, for some chemicals exceedances of AWQC support the results of this LOE, although AWQC is an uncertain LOE.	No.
	Comparison of surface water to AWQC	Comparison to AWQC (17.5 g/day)	Surface water	No. AWQC not site-specific. Criteria may not be applicable to shellfish.	Highly uncertain given that AWQC not based on site-specific uptake of chemicals into shellfish.	Yes, AWQC could be PRGs.	For some chemicals, AWQC exceedances are consistent with risks based on empirical tissue data.	No.
	Comparison of TZW to AWQC	Comparison to AWQC (17.5 g/day)	TZW	No. AWQC not derived for TZW and are not site-specific. Criteria may not be applicable to shellfish.	Highly uncertain given that AWQC not based on TZW media and not based on site-specific uptake of chemicals into shellfish.	Yes, AWQC could be PRGs.	No, exceedances of AWQC in TZW not consistent with risks based on shellfish tissue data.	No.
Risks from direct contact with sediment	Risks calculated based on in-water sediment data	In-water worker	Sediment	Yes. Risks based on empirical sediment data.	Exposure parameters for sediment direct contact based on soil direct contact parameters. There are uncertainties associated with frequency of direct contact with sediment exposure given that feasibility or practicality of use of the area not considered.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		High and Low Frequency Fisher	Sediment	Yes. Risks based on empirical sediment data. However, weaker LOE for direct sediment contact due to high uncertainties in exposure parameters.	Exposure parameters for sediment direct contact based on soil direct contact parameters. High uncertainty in exposure duration/frequency.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Tribal fisher	Sediment	Yes. Risks based on empirical sediment data. However, weaker LOE for direct sediment contact due to high uncertainties in exposure parameters.	Exposure parameters for sediment direct contact based on soil direct contact parameters. High uncertainty in exposure duration/frequency.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Diver, dry suit	Sediment	Yes, Risks based on empirical sediment data.	Yes. Extent of sediment exposure while diving is unknown.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Diver, wet suit	Sediment	No, this exposure scenario was evaluated at the direction of EPA. Conversations with diving companies indicate this is not a potentially complete exposure pathway.	Yes. Commercial diving companies did not report using wet suits for diving in the LWR. If wet suit diving occurs, the exposure frequency/duration is unknown.	Yes	No, this is the only LOE for this exposure scenario.	No

LOE	Methods for Assessing LOE	Assessments	Potential PRG Matrix (e.g., sediment, surface water, TZW)	Strong LOE? Why?	What issues affect reliability and certainty of LOE?	Can a numeric PRG be derived? (e.g., lack of sediment relationship)*	Corroborated by other LOEs? If so, which ones and what are their strength.	LWG Position – Should this LOE be used to derive PRGs for use in FS?
	Risks calculated based on beach sediment data	Adult recreational beach user	Sediment	Yes. Risks based on empirical sediment data. High uncertainties in exposure parameters.	Exposure parameters for sediment direct contact based on soil direct contact parameters.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Child recreational beach user	Sediment	Yes. Risks based on empirical sediment data.	Exposure parameters for sediment direct contact based on soil direct contact parameters.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Dockside worker	Sediment	Yes. Risks based on empirical sediment data.	Exposure parameters for sediment direct contact based on soil direct contact parameters.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		High and Low Frequency Fisher	Sediment	Yes. Risks based on empirical sediment data. However, weaker LOE for direct sediment contact due to high uncertainties in exposure parameters.	Exposure parameters for sediment direct contact based on soil direct contact parameters. High uncertainty in exposure duration/frequency.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Tribal fisher	Sediment	Yes. Risks based on empirical sediment data. However, weaker LOE for direct sediment contact due to high uncertainties in exposure parameters.	Exposure parameters for sediment direct contact based on soil direct contact parameters. High uncertainty in exposure duration/frequency.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Transient	Sediment					No. No COCs for this LOE.
Risks from direct contact with surface water	Risks calculated based on surface water data	Adult recreational beach user	Surface water					No. No COCs for this LOE.
		Child recreational beach user	Surface water					No. No COCs for this LOE.
		Transient	Surface water					No. No COCs for this LOE.
		Diver, dry suit	Surface water	Yes, Risks based on empirical surface water data.	For PAHs, the dermal permeability coefficient is outside the predictive domain.	Yes	No, this is the only LOE for this exposure scenario.	Yes
		Diver, wet suit	Surface water	No, this exposure scenario was evaluated at the direction of EPA. Conversations with diving companies indicate this is not a potentially complete exposure pathway.	Commercial diving companies did not report using wet suits for diving in the LWR. If wet suit diving occurs, the exposure frequency/duration is unknown.	Yes	No, this is the only LOE for this exposure scenario.	No

LOE	Methods for Assessing LOE	Assessments	Potential PRG Matrix (e.g., sediment, surface water, TZW)	Strong LOE? Why?	What issues affect reliability and certainty of LOE?	Can a numeric PRG be derived? (e.g., lack of sediment relationship)*	Corroborated by other LOEs? If so, which ones and what are their strength.	LWG Position – Should this LOE be used to derive PRGs for use in FS?
Risks from hypothetical drinking water use of surface water	Risks calculated based on surface water data	Adult resident, hypothetical drinking water scenario	Surface water	No, this is a hypothetical exposure scenario that was evaluated at the direction of EPA.	There are no current or future planned uses of the LWR within Portland Harbor as a drinking water source. If surface water were used as a drinking water source, treatment would be required prior to use.	Yes	Yes, the calculated risks are consistent with the results of the surface water and loading estimate comparisons with MCLs. However, none of these are strong LOEs.	No. Only COC is arsenic, which is due to background.
		Child resident, hypothetical drinking water scenario	Surface water	No, this is a hypothetical exposure scenario that was evaluated at the direction of EPA.	There are no current or future planned uses of the LWR within Portland Harbor as a drinking water source. If surface water were used as a drinking water source, treatment would be required prior to use.	Yes	Yes, the calculated risks are consistent with the results of the surface water and loading estimate comparisons with MCLs. However, none of these are strong LOEs.	No. Only COC is arsenic, which is due to background.
	Comparison of surface water to MCLs	Comparison of surface water to MCLs, point-by-point	Surface water	No, this scenario is not consistent with existing or reasonable future use of untreated surface water for domestic use. MCLs should not be applied on a point-by-point basis.	There are no current or future planned uses of the LWR within Portland Harbor as a drinking water source. If surface water were used as a drinking water source, treatment would be required prior to use. If surface water were used as a drinking water source, exposure would occur throughout the water column and not on a point-by-point basis.	Yes, MCLs could be PRGs.	No, the MCL exceedances on a point-by-point basis are not consistent with the risks calculated for the hypothetical drinking water scenario or with the vertically integrated comparison. Furthermore, the point-by-point comparison was not consistent with the regulatory intent of MCLs.	No.
		Comparison of surface water to MCLs, vertically integrated	Surface water	No, this is a hypothetical exposure scenario that was evaluated at the direction of EPA.	There are no current or future planned uses of the LWR within Portland Harbor as a drinking water source. If surface water were used as a drinking water source, treatment would be required prior to use.	Yes, MCLs could be PRGs.	Yes, the surface water comparison with MCLs is consistent with the calculated risks and loading estimate comparison. However, none of these are strong LOEs.	No. No exceedances of MCLs.
	Comparison of TZW to MCLs	Comparison of TZW to MCLs	TZW	No, this is a hypothetical exposure scenario that was evaluated at the direction of EPA. TZW is not evaluated for direct drinking water exposures.	There are no complete exposure pathways for humans directly to TZW. TZW is not considered a drinking water source.	Yes, MCLs could be PRGs.	No, this is the only LOE for this exposure scenario.	No.
		Comparison of surface water loading estimates to MCLs	TZW	No, this is a hypothetical exposure scenario that was evaluated at the direction of EPA.	There are no current or future planned uses of the LWR within Portland Harbor as a drinking water source. If surface water were used as a drinking water source, treatment would be required prior to use. Uncertainty associated with the loading estimates.	Yes, MCLs could be PRGs.	Yes, results of loading estimate comparison are consistent with risks calculated based on surface water data and comparison of vertically integrated surface water to MCLs. However, none of these are strong LOEs.	No. No exceedances of MCLs.

*In some cases, although a risk may have been determined, derivation of a sediment PRG may not be logistically feasible, such as when a relationship between biota and sediment cannot be established.